Chapter 5: Treatment Recommendations

5 Administration & Implementation Strategy

Critical to the implementation of this Wildfire Mitigation Plan will be the identification of, and implementation of, an integrated schedule of treatments targeted at achieving an elimination of the lives lost, and reduction in structures destroyed, infrastructure compromised, and unique ecosystems damaged that serve to sustain the way-of-life and economy of Latah County and the region. Since there are many land management agencies and thousands of private landowners in Latah County, it is reasonable to expect that differing schedules of adoption will be made and varying degrees of compliance will be observed across all ownerships.

Latah County encourages the philosophy of instilling disaster resistance in normal day-to-day operations. By implementing plan activities through existing programs and resources, the cost of mitigation is often a small portion of the overall cost of a project's design or program.

The federal land management agencies in Latah County, specifically the USDA Forest Service and USDI BLM, are participants in this planning process and have contributed to its development. Where available, their schedule of land treatments have been considered in this planning process to better facilitate a correlation between their identified planning efforts and the efforts of Latah County.

All risk assessments were made based on the conditions existing during 2004-05, thus, the recommendations in this section have been made in light of those conditions. However, the components of risk and the preparedness of the county's resources are not static. It will be necessary to fine-tune this plan's recommendations annually to adjust for changes in the components of risk, population density changes, infrastructure modifications, and other factors.

As part of the Policy of Latah County in relation to this planning document, this entire **Wildfire Mitigation Plan** should be reviewed annually at a special meeting of the Latah County Commissioners, open to the public and involving all municipalities/jurisdictions, where action items, priorities, budgets, and modifications can be made or confirmed. A written review of the plan should be prepared (or arranged) by the Chairman of the County Commissioners, detailing plans for the year's activities, and made available to the general public ahead of the meeting (in accord with the Idaho Open Public Meeting Laws). Amendments to the plan should be detailed at this meeting, documented, and attached to the formal plan as an amendment to the Wildfire Mitigation Plan. Re-evaluation of this plan should be made on the 5th anniversary of its acceptance, and every 5-year period following.

5.1 Prioritization of Mitigation Activities

Prioritization of projects will occur at the County, City, agency, and private levels. Differing prioritization processes will occur, however, the county and cities will adopt the following prioritization process, as indicated through the adoption of this plan by each municipality.

The prioritization process will include a special emphasis on cost-benefit analysis review. The process will reflect that a key component in funding decision is a determination that the project will provide an equivalent or more in benefits over the life of the project when compared with the costs. Projects will be administered by county and local jurisdictions with overall coordination provided by the County Disaster Services Coordinator.

County Commissioners and the elected officials of all jurisdictions will evaluate opportunities and establish their own unique priorities to accomplish mitigation activities where existing funds and resources are available and there is community interest in implementing mitigation measures. If no federal funding is used in these situations, the prioritization process may be less formal. Often the types of projects that the County can afford to do on their own are in relation to improved codes and standards, department planning and preparedness, and education. These types of projects may not meet the traditional project model, selection criteria, and benefit-cost model. The County will consider all pre-disaster mitigation proposals brought before the County Commissioners by department heads, city officials, fire districts and local civic groups.

When federal or state funding is available for hazard mitigation, there are usually requirements that establish a rigorous benefit-cost analysis as a guiding criterion in establishing project priorities. The county will understand the basic federal grant program criteria which will drive the identification, selection, and funding of the most competitive and worthy mitigation projects. FEMA's three grant programs (the post-disaster Hazard Mitigation Grant Program, the pre-disaster Flood Mitigation Assistance and Pre-Disaster Mitigation grant programs) that offer federal mitigation funding to state and local governments all include the benefit-cost and repetitive loss selection criteria.

The prioritization of projects will occur annually and be facilitated by the County Disaster Services Coordinator to include the County Commissioner's Office, City Mayors and Councils, Fire District Chiefs and Commissioners, agency representatives (USFS, State Lands, etc.). The prioritization of projects will be based on the selection of projects which create a balanced approach to pre-disaster mitigation which recognizes the hierarchy of treating in order (highest first):

- People and Structures
- Infrastructure
- Local and Regional Economy
- Traditional Way of Life
- Ecosystems

5.1.1 Prioritization Scheme

A numerical scoring system is used to prioritize projects. This prioritization serves as a guide for the county when developing mitigation activities. This project prioritization scheme has been designed to rank projects on a case by case basis. In many cases, a very good project in a lower priority category could outrank a mediocre project in a higher priority. The county mitigation program does not want to restrict funding to only those projects that meet the high priorities because what may be a high priority for a specific community may not be a high priority at the county level. Regardless, the project may be just what the community needs to mitigate disaster. The flexibility to fund a variety of diverse projects based on varying reasons and criteria is a necessity for a functional mitigation program at the County and community level.

To implement this case by case concept, a more detailed process for evaluating and prioritizing projects has been developed. Any type of project, whether county or site specific, will be prioritized in this more formal manner.

To prioritize projects, a general scoring system has been developed. This prioritization scheme has been used in statewide all hazard mitigations plans. These factors range from cost-benefit ratios, to details on the hazard being mitigated, to environmental impacts.

Since planning projects are somewhat different than non-planning projects when it comes to reviewing them, different criteria will be considered, depending on the type of project.

The factors for the non-planning projects include:

- Cost/Benefit
- Population Benefit
- Property Benefit
- Economic Benefit
- Project Feasibility (environmentally, politically, socially)
- Hazard Magnitude/Frequency
- Potential for repetitive loss reduction
- Potential to mitigate hazards to future development
- Potential project effectiveness and sustainability

The factors for the planning projects include:

- Cost/Benefit
- Vulnerability of the community or communities
- Potential for repetitive loss reduction
- Potential to mitigate hazards to future development

Since some factors are considered more critical than others, two ranking scales have been developed. A scale of 1-10, 10 being the best, has been used for cost, population benefit, property benefit, economic benefit, and vulnerability of the community. Project feasibility, hazard magnitude/frequency, potential for repetitive loss reduction, potential to mitigate hazards to future development, and potential project effectiveness and sustainability are all rated on a 1-5 scale, with 5 being the best. The highest possible score for a non-planning project is 65 and for a planning project is 30.

The guidelines for each category are as follows:

5.1.1.1 Benefit / Cost

The analysis process will include summaries as appropriate for each project, but will include benefit / cost analysis results, Projects with a negative benefit / cost analysis result will be ranked as a 0. Projects with a positive Benefit / Cost analysis will receive a score equal to the projects Benefit / Cost Analysis results divided by 10. Therefore a project with a BC ratio of 50:1 would receive 5 points, a project with a BC ratio of 100:1 (or higher) would receive the maximum points of 10.

5.1.1.2 Population Benefit

Population Benefit relates to the ability of the project to prevent the loss of life or injuries. A ranking of 10 has the potential to impact over 3,000 people. A ranking of 5 has the potential to impact 100 people, and a ranking of 1 will not impact the population. In some cases, a project may not directly provide population benefits, but may lead to actions that do, such as in the case of a study. Those projects will not receive as high of a rating as one that directly effects the population, but should not be considered to have no population benefit.

5.1.1.3 Property Benefit

Property Benefit relates to the prevention of physical losses to structures, infrastructure, and personal property. These losses can be attributed to potential dollar losses. Similar to cost, a ranking of 10 has the potential to save over $1,000,000 in losses, a ranking of 5 has the potential to save roughly $100,000 in losses, and a ranking of 1 only has the potential to save less than $100 in losses. In some cases, a project may not directly provide property benefits, but may lead to actions that do, such as in the case of a study. Those projects will not receive as high of a rating as one that directly effects property, but should not be considered to have no property benefit.

5.1.1.4 Economic Benefit

Economic Benefit is related to the savings from mitigation to the economy. This benefit includes reduction of losses in revenues, jobs, and facility shut downs. Since this benefit can be difficult to evaluate, a ranking of 10 would prevent a total economic collapse, a ranking of 5 could prevent losses to about half the economy, and a ranking of 1 would not prevent any economic losses. In some cases, a project may not directly provide economic benefits, but may lead to actions that do, such as in the case of a study. Those projects will not receive as high of a rating as one that directly affects the economy, but should not be considered to have no economic benefit.

5.1.1.5 Vulnerability of the Community

For planning projects, the vulnerability of the community is considered. A community that has a high vulnerability with respect to other jurisdictions to the hazard or hazards being studied or planned for will receive a higher score. To promote planning participation by the smaller or less vulnerable communities in the state, the score will be based on the other communities being considered for planning grants. A community that is the most vulnerable will receive a score of 10, and one that is the least, a score of 1.

5.1.1.6 Project Feasibility (Environmentally, Politically & Socially)

Project Feasibility relates to the likelihood that such a project could be completed. Projects with low feasibility would include projects with significant environmental concerns or public opposition. A project with high feasibility has public and political support without environmental concerns. Those projects with very high feasibility would receive a ranking of 5 and those with very low would receive a ranking of 1.

5.1.1.7 Hazard Magnitude/Frequency

The Hazard Magnitude/Frequency rating is a combination of the recurrence period and magnitude of a hazard. The severity of the hazard being mitigated and the frequency of that event must both be considered. For example, a project mitigating a 10-year event that causes significant damage would receive a higher rating than one that mitigates a 500-year event that causes minimal damage. For a ranking of 5, the project mitigates a high frequency, high magnitude event. A 1 ranking is for a low frequency, low magnitude event. Note that only the damages being mitigated should be considered here, not the entire losses from that event.

5.1.1.8 Potential for repetitive loss reduction

Those projects that mitigate repetitive losses receive priority consideration here. Common sense dictates that losses that occur frequently will continue to do so until the hazard is mitigated. Projects that will reduce losses that have occurred more than three times receive a rating of 5. Those that do not address repetitive losses receive a rating of 1. Potential to mitigate hazards to future development Proposed actions that can have a direct impact on the vulnerability of future development are given additional consideration. If hazards can be mitigated on the onset of the development, the county will be less vulnerable in the future. Projects that will have a significant effect on all future development receive a rating of 5. Those that do not affect development should receive a rating of 1.

5.1.1.9 Potential project effectiveness and sustainability

Two important aspects of all projects are effectiveness and sustainability. For a project to be worthwhile, it needs to be effective and actually mitigate the hazard. A project that is questionable in its effectiveness will score lower in this category. Sustainability is the ability for the project to be maintained. Can the project sustain itself after grant funding is spent? Is maintenance required? If so, are or will the resources be in place to maintain the project. An action that is highly effective and sustainable will receive a ranking of 5. A project with effectiveness that is highly questionable and not easily sustained should receive a ranking of 1.

5.1.1.10 Final ranking

Upon ranking a project in each of these categories, a total score can be derived by adding together each of the scores. The project can then be ranking high, medium, or low based on the non-planning project thresholds of:

Project Ranking Priority Score

- High 40-65
- Medium 25-39
- Low 9-25

5.2 Possible Wildfire Mitigation Activities

As part of the implementation of wildfire mitigation activities in Latah County, a variety of management tools may be used. Management tools include but are not limited to the following:

- Homeowner and landowner education
- Policy changes for structures and infrastructure in the WUI
- Homesite defensible zone through fuels modification
- Community defensible zone fuels alteration
- Access improvements
- Access creation
- Emergency response enhancements (training, equipment, locating new fire stations, new fire districts)
- Regional land management recommendations for private, state, and federal landowners

Maintaining private property rights will continue to be one of the guiding principles of this plan's implementation. Sound risk management is a foundation for all fire management activities. Risks and uncertainties relating to fire management activities must be understood, analyzed, communicated, and managed as they relate to the cost of either doing or not doing an activity. Net gains to the public benefit will be an important component of decisions.

5.3 WUI Safety & Policy

Wildfire mitigation efforts must be supported by a set of policies and regulations at the county level that maintain a solid foundation for safety and consistency. The recommendations enumerated here serve that purpose. Because these items are regulatory in nature, they will not necessarily be accompanied by cost estimates. These recommendations are policy related in nature and therefore are recommendations to the appropriate elected officials; debate and formulation of alternatives will serve to make these recommendations suitable and appropriate.

Table 5.1. WUI Action Items in Safety and Policy.

Action Item	Goals and Objectives	Responsible Organization	Action Items & Planning Horizon
5.1.a: Amend existing building codes to apply equally to new single housing construction as it does to subdivisions.	**Protection of people and structures** by applying a standard of road widths, access, and building regulations to insure new homes can be protected while curtailing risks to fire fighters (defensible space, access management, water systems, building codes, signage, and maintenance of private forest and range lands)	**County Commissioners** in cooperation with Rural Fire Districts and Planning and Zoning.	• Year 1 debate and adoption of revised code (2005). • Review adequacy of changes annually, make changes as needed.
5.1.b: Rural Signage (Road Signs & Rural Fire District Boundary Signs) Improvements across the county	**Protection of people, structures, and infrastructure** by improving the ability of emergency services personnel, residents, and visitors to navigate roads.	Highway Districts in cooperation with County Commissioners and Rural Fire Departments	Can be completed during year 1 (2005) pending funding to implement the project. Estimate $15,000 for signs and posting.
5.1.c: Develop County policy concerning building materials used in high-risk WUI areas on existing structures and new construction (e.g., Troy, Deary, Helmer, Bovill, Kendrick, Juliaetta)	**Protection of people and structures** by improving the ability of emergency response personnel to respond to threatened homes in high-risk areas.	Planning and Zoning in cooperation with County Commissioners Office and Rural Fire Departments	**Year 1 (2005) activity:** Consider and develop policy to address construction materials for homes and businesses located in high wildfire risk areas. Specifically, a County policy concerning wooden roofing materials and flammable siding, especially where juxtaposed near heavy wildland fuels.

Table 5.1. WUI Action Items in Safety and Policy.

Action Item	Goals and Objectives	Responsible Organization	Action Items & Planning Horizon
5.1.d: Develop a formal WUI Advisory Committee to advise County Commissioners on WUI Issues and Treatments	**Protection of people and structures** by improving the ability of decision makers to make informed decisions about wildfire issues.	**County Commissioners Office**	**Year 1 (2005) activity:** Formalize a committee, its membership and service decided on by the County Commissioners, to collaborate on WUI issues within Latah County. Members potentially to include land management organizations and companies, private landowners, and fire protection personnel.
5.1.e: Provide funding for a full-time Geographic Information System position at the Latah County Courthouse.	**Protection of people and structures** by improving County maps and data systems used by emergency services personnel, highway districts and other officials.	**County Commissioners Office** and Planning and Zoning.	**Year 1 (2005) activity:** Seek funding for full-time GIS staff position. Post job listing for potential candidates.
5.1.f: Adoption of International Fire Code and creation of a County Fire Warden position that would inspect sites for compliance to the Code as well as enforce the mandates of the Code.	**Protection of people and structures** by improving the ability of emergency services personnel to safely and effectively respond to home fires.	**Planning and Zoning** with County Commissioners Office and Rural Fire Departments.	**Year 1 (2005) activity:** Consider and develop policy to adopt the International Fire Code regulations adopted by the State of Idaho and seek funding to create a County Fire Warden position.
5.1.g. Creation of Latah County Fire Warden position.	**Protection of people and structures** by improving the ability of decision makers to make informed decisions about wildfire issues, and fire fighters to gain organized training opportunities.	**County Commissioners Office, in cooperation with rural fire protection districts.**	**Year 1 (2005) activity-** Identify funding source and job description to include: • Coordination with rural fire chiefs • Fire Code adherence in the County related to new construction • Training coordinator for Latah County fire chiefs • Coordination as fuel mitigation coordinator for county and cities **Year 1 (2005) activity:** Advertise for position and hire individual for post.

5.4 People and Structures

The protection of people and structures will be tied together closely as the loss of life in the event of a wildland fire is generally linked to a person who could not, or did not, flee a structure threatened by a wildfire. The other incident is a fire fighter who suffers the loss of life during the combating of a fire. Many of the recommendations in this section will define a set of criteria for implementation while others will be rather specific in extent and application.

Many of the recommendations in this section involve education and increasing awareness of the residents of Latah County. These recommendations stem from a variety of factors including items that became obvious during the analysis of the public surveys, discussions during public meetings, and observations about choices made by residents living in the Wildland-Urban Interface. Over and over, the common theme was present that pointed to a situation of landowners not recognizing risk factors:

- Fire District personnel pointed to numerous examples of inadequate access to homes of people who believe they have adequate ingress.
- Discussions with the general public indicated an awareness of wildland fire risk, but they could not generally identify risk factors.
- A large number of the respondents to the public mail survey (49%) indicated that they want to participate in educational opportunities focused on the WUI and what they can do to increase their home's chances of surviving a wildfire.

Residents and policy makers of Latah County should recognize certain factors that exist today, that in their absence would lead to an increase in the risk factors associated with wildland fires in the WUI of Latah County. These items listed below should be encouraged, acknowledged, and recognized for their contributions to the reduction of wildland fire risks:

- **Livestock Grazing** in and around the communities of Latah County has led to a reduction of many of the fine fuels that would have been found in and around the communities and in the wildlands of Latah County. Domestic livestock not only eat these grasses, forbs, and shrubs, but also trample certain fuels to the ground where decomposition rates may increase. Livestock ranchers tend their stock, placing additional sets of eyes into the forests and rangelands of the county where they may observe ignitions, or potentially risky activities. Livestock grazing in this region should be encouraged in the future as a low cost, positive tool of wildfire mitigation in the Wildland-Urban Interface and in the wildlands.
- **Forest Management** in Latah County has been affected greatly by the reduction of operating sawmills in the region. However, the active forest management program of the U.S. Forest Service, Idaho Department of Lands, and many of the private and industrial forestland owners in the region has led to a significant reduction of wildland fuels where they are closest to homes and infrastructure. In addition, forest resource professionals managing these lands, and the lands of the state and federal agencies are generally trained in wildfire protection and recognize risk factors when they occur. One of the reasons that Latah County forestlands have not been impacted by wildland fires to a greater degree historically, is the presence and activities related to active forest management.
- **Agriculture** is a significant component of Latah County's economy. Much of the rangeland interface is made up of a mosaic of agricultural crops, even extending to the forestland interface. The original conversion of these lands to agriculture from rangeland and forestland, was targeted at the most productive soils and juxtaposition to water. Many of these productive rangeland ecosystems were consequently also at some of the highest risk to wildland fires because biomass accumulations increased in these productive landscapes. The result today, is much of the landscape historically prone to frequent fires, has been converted to agriculture, which is at a much lower risk than prior to its conversion. The preservation of a viable agricultural economy in Latah County is integral to the continued management of wildfire risk in this region.

Table 5.2. WUI Action Items for People and Structures.

Action Item	Goals and Objectives	Responsible Organization	Action Items, Planning Horizon and Estimated Costs
5.2.a: Youth and Adult Wildfire Educational Programs	**Protect people and structures** by increasing awareness of WUI risks, how to recognize risk factors, and how to modify those factors to reduce risk	Cooperative effort including: • University of Idaho Cooperative Extension • Idaho Department of Lands • State and Private Forestry Offices • Bureau of Land Management • Local School Districts • Cities of Latah County	To start immediately using existing educational program materials and staffing. Formal needs assessment should be responsibility of University of Idaho Cooperative Extension faculty and include the development of an integrated WUI educational series by year 2 (2006). Costs initially to be funded through existing budgets for these activities to be followed with grant monies to continue the programs as identified in the formal needs assessment.
5.2.b: Wildfire risk assessments of homes in identified communities	**Protect people and structures** by increasing awareness of specific risk factors of individual homesites in the at-risk landscapes. Only after these are completed can homesite treatments follow.	To be implemented by **County Commissioners Office** in cooperation with the **Rural Fire Departments and Wildland Fire Protection Specialists, and every city municipality in the county**. Actual work may be completed by Wildfire Mitigation Consultants.	• **Cost:** Approximately $100 per homesite for inspection, written report, and discussions with the homeowners • **Action Item:** Secure funding and contract to complete the inspections during years 1 & 2 (2005-06) • Homesite inspection reports and estimated budget for each homesite's treatments will be a requirement to receive funding for treatments through grants.
	Home site inspections:	• Bovill Area: 40 structures – 100% in need of assessments, estimated cost $4,000 • Deary Area: 80 structures – 80% in need of assessments, estimated cost $6,400 • Genesee Area: 45 structures – 40% in need of assessments, estimated cost $1,800 • Juliaetta Area: 75 structures – 90% in need of assessments, estimated cost $6,750 • Kendrick Area: 38 structures – 80% in need of assessments, estimated cost $3,040 • Troy Area: 120 structures – 80% in need of assessments, estimated cost $9,600 • Moscow Area: 500 structures – 75% in need of assessments, estimated cost $37,500 • Onaway/Potlatch/Harvard/Princeton: 472 structures – 85% in need of assessments, estimated cost $40,120 • Other rural areas: 3,200 structures – 85% in need of assessments, estimated cost $272,000 • Total Estimated cost for Home site inspections, and fuels treatment recommendation development $381,210	

Table 5.2. WUI Action Items for People and Structures.

Action Item	Goals and Objectives	Responsible Organization	Action Items, Planning Horizon and Estimated Costs
5.2.c: Homesite WUI Treatments	**Protect people, structures, and increase fire fighter safety** by reducing the risk factors surrounding homes in the WUI of Latah County	**County Commissioners** in cooperation with Cities, rural fire districts, Idaho Department of Lands, and USDA Forest Service *Complete concurrently with 5.4.b*	• Actual funding level will be based on the outcomes of the homesite assessments and cost estimates • **Estimate** that treatments in rangelands will cost approximately $850 per homesite for a defensible space of roughly 150'. • Estimate that treatments in forestland will cost roughly $1,000 per homesite for a defensible space of about 200'. • Homesite treatments can begin with the securing of funding for the treatments and immediate implementation in 2004 and will continue from year 1 through 5 (2008).
	Home site treatments: *Estimating average cost of $950 per homesite*	• Bovill Area: 40 structures – 100% in need of assessments, estimated cost $417,210 • Deary Area: 80 structures – 80% in need of assessments, estimated cost $60,800 • Genesee Area: 45 structures – 40% in need of assessments, estimated cost $17,100 • Juliaetta Area: 75 structures – 90% in need of assessments, estimated cost $64,125 • Kendrick Area: 38 structures – 80% in need of assessments, estimated cost $28,880 • Troy Area: 120 structures – 80% in need of assessments, estimated cost $91,200 • Moscow Area: 500 structures – 75% in need of assessments, estimated cost $356,250 • Onaway/Potlatch/Harvard/Princeton: 472 structures – 85% in need of assessments, estimated cost $381,140 • Other rural areas: 3,200 structures – 85% in need of assessments, estimated cost $2,584,000 • Total Estimated cost for Home site inspections, and fuels treatment recommendation development $3,619,565	

Table 5.2. WUI Action Items for People and Structures.

Action Item	Goals and Objectives	Responsible Organization	Action Items, Planning Horizon and Estimated Costs
5.2.d: Community Defensible Zone WUI Treatments	**Protect people, structures, and increase fire fighter safety** by reducing the risk factors surrounding high risk communities in the WUI of Latah County	**County Commissioners** in cooperation with the **Idaho Department of Lands** and the **BLM** to identify funding availability and project implementation opportunities.	• Actual funding level will be based on the outcomes of the homesite assessments and cost estimates. • **Years 2-5 (2006-09):** Treat high risk wildland fuels from homesite defensible space treatments to an area extending 400 feet to 750 feet beyond home defensible spaces, where steep slopes and high accumulations of risky fuels exist near homes and infrastructure. Should link together home treatment areas. Treatments target high risk concentrations of fuels and not 100% of the area identified. To be completed only after or during the creation of home defensible spaces have been implemented. • **Communities and areas to target:** Others based on additional assessments.
5.2.e: Maintenance of Homesite WUI Treatments	**Protect people, structures, and increase fire fighter safety** by reducing the risk factors surrounding homes in the WUI of Latah County	**County Commissioners Office** in cooperation with Rural Fire Departments and local home owners	• Homesite defensibility treatments must be maintained periodically to sustain benefits of the initial treatments. • Each site should be assessed 5 years following initial treatment • Estimated re-inspection cost will be $50 per homesite on all sites initially treated or recommended for future inspections • Follow-up inspection reports with treatments as recommended years 5 through 10.
5.2.f: Re-entry of Homesite WUI Treatments	**Protect people, structures, and increase fire fighter safety** by reducing the risk factors surrounding homes in the WUI of Latah County	**County Commissioners Office** in cooperation with Rural Fire Departments and local home owners	• Re-entry treatments will be needed periodically to maintain the benefits of the initial WUI home treatments. Each re-entry schedule should be based on the initial inspection report recommendations, observations, and changes in local conditions. Generally occurs every 5-10 years.

Table 5.2. WUI Action Items for People and Structures.

Action Item	Goals and Objectives	Responsible Organization	Action Items, Planning Horizon and Estimated Costs
5.2.g: Access Improvements of bridges, cattle guards, culverts, and limiting road surfaces (e.g. Sperry Bridge, McGary Bridge, Little Bear Creek crossing at Troy, Flat Creek crossing on State Highway 9)	**Protection of people, structures, infrastructure, and economy** by improving access for residents and fire fighting personnel in the event of a wildfire. Reduces the risk of a road failure that leads to the isolation of people or the limitation of emergency vehicle and personnel access during an emergency.	**Highway Districts** in cooperation with the BLM, State of Idaho (Lands and Transportation), and industrial forestland owners (e.g., Boise Corp.).	• **Year 1 (2005):** Update existing assessment of travel surfaces, bridges, and cattle guards in Latah County as to location. Secure funding for implementation of this project (grants) • **Year 2 (2006):** Conduct engineering assessment of limiting weight restrictions for all surfaces (e.g., bridge weight load maximums). Estimate cost of $100,000 which might be shared between County, BLM, State, and private based on landownership associated with road locations. • **Year 2 (2006):** Post weight restriction signs on all limiting crossings, copy information to rural fire districts and wildland fire protection agencies in affected areas. Estimate cost at roughly $15-$25,000 for signs and posting. • **Year 3 (2007):** Identify limiting road surfaces in need of improvements to support wildland fire fighting vehicles and other emergency equipment. Develop plan for improving limiting surfaces including budgets, timing, and resources to be protected for prioritization of projects (benefit/cost ratio analysis). Create budget based on full assessment.
5.2.h: Access Improvements through road-side fuels management	**Protection of people, structures, infrastructure, and economy** by improving access for residents and fire fighting personnel in the event of a wildfire. Allows for a road based defensible area that can be linked to a terrain based defensible areas.	**County Highway Districts** in cooperation with BLM, State of Idaho (Lands and Transportation), USFS and industrial forestland owners.	• **Year 1 (2005):** Update existing assessment of roads in Latah County as to location. Secure funding for implementation of this project (grants). • **Year 2 (2006):** Specifically address access issues to Troy, Deary, Helmer, Bovill, Viola, and others identified in assessment, such as Highway 12 corridor. Identify forestland and rangeland fuels difficult to control during wildfire that would also respond well to thinning, pruning, and brush cutting (hand pile and burn or chip), while increasing ingress and egress use in wildfire emergencies. Target 100' on downhill side of roads and 75' on uphill side for estimated cost of $15,000 per mile of road treated. If 10 miles of roadway are prioritized for treatment (est.) **B/C Ratio of 14.7:1 is achieved**. This B/C ratio may be maintained in many rural treatment areas of the county. • **Year 3 (2007):** Secure funding and implement projects to treat road-side fuels.

Table 5.2. WUI Action Items for People and Structures.

Action Item	Goals and Objectives	Responsible Organization	Action Items, Planning Horizon and Estimated Costs
5.2.i: Development of "Community Emergency Response Team" program in communities.	**Protection of people, structures, infrastructure, and economy** by improving emergency response and recruiting more local residents for emergency response organizations (i.e. fire departments, ambulance, police departments)	**Latah County Disaster Services** and community governments.	• **2005** develop team and objectives, implement program including emergency services personnel

5.5 Infrastructure

Significant infrastructure refers to the communications, transportation (road and rail networks), energy transport supply systems (gas and power lines), and water supply that service a region or a surrounding area. All of these components are important to the North Central Idaho Area, and to Latah County specifically. These networks are by definition a part of the Wildland-Urban Interface in the protection of people, structures, **infrastructure**, and unique ecosystems. Without supporting infrastructure a community's structures may be protected, but the economy and way of life lost. As such, a variety of components will be considered here in terms of management philosophy, potential policy recommendations, and recommendations.

Communication Infrastructure: This component of the WUI seems to be diversified across the county with multiple source and destination points, and a spread-out support network. Although site specific treatments will impact directly local networks, little needs to be done to insure the system's viability.

Transportation Infrastructure (road and rail networks): This component of the WUI has some significant potential limitations in Latah County. U.S. Highway 95 is the primary maintained route linking north and south Idaho. Thus, most intrastate traffic flowing north to south or vice versa travels through the County. Also, State Highways 3, 6, and 8 connect the more remote communities with the commercial hubs of Moscow and nearby Lewiston and St. Maries. In many cases, these roads are the only primary route to and from the smaller Latah County communities. In the event these highways are disabled, access or evacuation to some areas may become limited to seasonally maintained secondary roads or forest routes.

Other roads in the county have limiting characteristics, such as narrow travel surfaces, sharp turning radii, low load limit bridges and cattle guards, and heavy accumulations of fuels adjacent to, and overtopping some roads. Some of these roads access remote forestland and rangeland areas. While their improvements will facilitate access in the case of a wildfire, they are not the priority for treatments in the county. Roads that have these inferior characteristics and access homes and businesses are the priority for improvements in the county.

Energy Transport Supply Systems (gas and power lines): A number of power lines crisscross Latah County. Unfortunately, many of these power lines cross over forestland ecosystems. When fires ignite in these vegetation types, the fires tend to be slower moving and burn at relatively high intensities. Additionally, there is a potential for high temperatures and low humidity with high winds to produce enough heat and smoke to threaten power line stability. Most power line corridors have been cleared of vegetation both near the wires and from the ground below. Observations across the county of these high tension power lines lead to the conclusion that current conditions coupled with urban developments have mitigated this potential substantially. It is the recommendation of this Wildfire Mitigation Plan that this situation be evaluated annually and monitored but that treatments not be specifically targeted at this time. The use of these areas as "fire breaks" should be evaluated further, especially in light of the treatments enumerated in this plan (eg., intensive livestock grazing, mechanical treatments, and herbicide treatments).

Water Supply: In many of Idaho's communities, water is derived from surface flow that is treated and piped to homes and businesses. When wildfires burn a region, they threaten these watersheds by the removal of vegetation, creation of ash and sediment. As such, watersheds should be afforded the highest level of protection from catastrophic wildfire impacts. In Latah County, water is supplied to many homes by single home or multiple home wells. However, the community of Troy depends on the Big Creek Watershed as its primary water source.

As a priority recommendation of this plan, it is strongly suggested that Watershed Management Plans for the Big Creek Watershed be completed to plan for and implement a management program that specifically mitigates wildfire potential while managing the watersheds for sustained water flow that is clean and timed according to the needs of the community.

5.5.1 Proposed Activities

Table 5.3. Infrastructure Enhancements.

Action Item	Goals and Objectives	Responsible Organization	Action Items & Planning Horizon
5.3.a: Post FEMA "Emergency Evacuation Route" signs along the identified primary and secondary access routes in the county.	**Protection of people and structures by** informing residents and visitors of significant infrastructure in the county that will be maintained in the case of an emergency.	**County Commissioners** in cooperation with Rural Fire Districts and County Highway Districts.	• Purchase of signs (2005). • Posting roads and make information available to residents of the importance of Emergency Routes.
5.3.b: Fuels mitigation of the FEMA "Emergency Evacuation Routes" in the county to insure these routes can be maintained in the case of an emergency.	**Protection of people and structures by** providing residents and visitors with ingress and egress that can be maintained during an emergency.	**County Commissioners** in cooperation with Rural Fire Districts and County Highway Districts.	• Full assessment of road defensibility and ownership participation (2005). • Implementation of projects (linked to item 5.2.g, 5.2.h, and 5.2.i.
5.3.c. Watershed Management Plan Completion for the Big Creek Watershed.	**Sustainability of Communities by** increasing the probability that communities will have safe drinking water following a wildfire that burns in the community watershed.	**Water Departments and City Governments.**	• Identify landowners and seek funding to implement the planning process (2005). • Implementation of projects based on results of watershed management plans.

5.6 Resource and Capability Enhancements

There are a number of resource and capability enhancements identified by the rural and wildland fire fighting districts in Latah County. All of the needs identified by the districts are in line with increasing the ability to respond to emergencies in the WUI and are fully supported by the planning committee.

Specific repeated themes of needed resources and capabilities include:

- Improved radio capabilities within each district and for mutual aid operations
- Retention and recruitment of volunteers
- Training and development of rural fire fighters in structure and wildland fire
- Development of rural fire district for the Kendrick-Juliaetta area and supporting equipment and personnel.

Although additional, and specific, needs were enumerated by the districts in Latah County, these items were identified by multiple districts and in the public meetings. The implementation of each issue will rely on either the isolated efforts of the rural fire districts or a concerted effort

by the county to achieve equitable enhancements across all of the districts. Given historic trends, individual departments competing against neighboring departments for grant monies and equipment will not necessarily achieve county wide equity. However, the Clearwater Resource Conservation and Development Council, Inc., may be an organization uniquely suited to work with all of the districts in Latah County and adjacent counties to assist in the prioritization of needs across district and even county lines. Once prioritized, the Clearwater RC&D is in a position to assist these districts with identifying, competing for, and obtaining grants and equipment to meet these needs.

Table 5.4. WUI Action Items in Fire Fighting Resources and Capabilities.

Action Item	Goals and Objectives	Responsible Organization	Action Items & Planning Horizon
5.4.a: Enhance radio availability in each district, link in to existing dispatch, and improve range within the region, conversion to consistent standard of radio types	**Protection of people and structures** by direct fire fighting capability enhancements.	**Clearwater RC&D** in cooperation with rural and wildland fire districts, and Latah County Commissioners.	• **Year 1 (2005):** Summarize existing two-way radio capabilities and limitations. Identify costs to upgrade existing equipment and locate funding opportunities. • **Year 2 (2006):** Acquire and install upgrades as needed.
5.4.b: Retention of Volunteer Fire Fighters	**Protection of people and structures** by direct fire fighting capability enhancements.	**Rural and Wildland Fire Districts** working with broad base of county citizenry to identify options, determine plan of action, and implement it.	• 5 Year Planning Horizon, extended planning time frame. • Target an increased recruitment (+10%) and retention (+20% longevity) of volunteers. • **Year 1 (2005):** Develop incentives program and implement it.
5.4.c: Increased training and capabilities of fire fighters	**Protection of people and structures** by direct fire fighting capability enhancements.	**Rural and Wildland Fire Districts** working with the **BLM and USFS** for wildland training opportunities and with the **State Fire Marshall's Office** for structural fire fighting training.	• **Year 1 (2005):** Develop a multi-county training schedule that extends 2 or 3 years in advance (continuously). • Identify funding and resources needed to carry out training opportunities and sources of each to acquire. • Year 1 (2005): Begin implementing training opportunities for volunteers.

Table 5.4. WUI Action Items in Fire Fighting Resources and Capabilities.

Action Item	Goals and Objectives	Responsible Organization	Action Items & Planning Horizon
5.4.d. Develop and update Mutual Aid Agreements between all Rural Fire Districts and the Federal and State wildfire fighting agencies working in and around Latah County.	**Protection of people and structures** by direct fire fighting capability enhancements.	Rural and Wildland Fire Districts, BLM, USFS, BIA, IDL, State Fire Marshall's Office.	• 2005: Identify current mutual aid agreements and needed agreements. • Draft and implement agreements across the county.
5.4.e: Facility, land, business plan, and basic supplies for Kendrick-Juliaetta Rural Fire District.	**Protection of people and structures** by direct fire fighting capability enhancements.	County Commissioners and Kendrick and Juliaetta city governments.	• Estimate of costs ○ $500,000 • 2 year planning horizon
5.4.f: Genesee Rural Fire Department to cover wildfires in "no mans Land" to the south.	**Protection of people and structures** by direct fire fighting capability enhancements.	Genesee Rural Fire Department, city of Genesee	• Define boundaries and legally annex this area into the Genesee Rural Fire Department coverage area.
5.4.g: Add additional repeater or move Elk Butte repeater to McGary Butte for better coverage.	**Protection of people and structures** by direct fire fighting capability enhancements.	County Commissioners and Rural Fire Departments, cities of Deary and Bovill	• **Year 1 (2005):** Develop a cost analysis of the two projects and decide which one is the most beneficial. Locate funding opportunities. • **Year 2 (2006):** Acquire necessary equipment and implement project.
5.4.h: Establish onsite water sources such as dry hydrants or underground storage tanks for rural housing developments.	**Protection of people and structures** by direct fire fighting capability enhancements.	County Commissioners and Rural Fire Departments	• Identify populated areas lacking sufficient water supplies and develop project plans to develop fill or helicopter dipping sites. • Implement project plans.
5.4.i: Acquire vehicle to tow mobile command unit and provide additional training of personnel to operate.	**Protection of people and structures** by direct fire fighting capability enhancements.	County Commissioners, Rural Fire Departments, and other emergency response organizations.	• **Year 1 (2005):** Verify stated need still exists, develop budget, and locate funding or equipment (surplus) sources. • **Year 1 or 2 (2005-06):** Acquire and deliver needed equipment to district based on prioritization by need and funding awards.

Table 5.4. WUI Action Items in Fire Fighting Resources and Capabilities.

Action Item	Goals and Objectives	Responsible Organization	Action Items & Planning Horizon
5.4.j: Obtain updated PPE's and a newer backup structural engine for Kendrick City Fire Department.	**Protection of people and structures** by direct fire fighting capability enhancements.	Kendrick Volunteer Fire Department, City of Kendrick	• **Year 1 (2005):** Verify stated need still exists, develop budget, and locate funding or equipment (surplus) sources. • **Year 1 or 2 (2005-06):** Acquire and deliver needed equipment to district based on prioritization by need and funding awards.
5.4.k: Additional storage facility, updated rolling stock, training, and personal protective equipment for Juliaetta City Fire Department.	**Protection of people and structures** by direct fire fighting capability enhancements.	County Commissioners, Juliaetta City Council, and Juliaetta City Fire Department.	• Estimate of Costs: ○ $500,000 • **2 Year Planning Horizon**
5.4.l: Obtain mobile repeater stations with back up power source.	**Protection of people and structures** by direct fire fighting capability enhancements.	County Commissioners, Clearwater RC&D, IDL, USDA Forest Service, and local fire departments.	• **Year 1 (2005):** Verify stated need still exists, develop budget, and locate funding or equipment (surplus) sources. • **Year 1 or 2 (2005-06):** Acquire and deliver needed equipment to districts based on prioritization by need and funding awards.

5.7 Regional Land Management Recommendations

Reference has been given to the role that forestry, grazing and agriculture have in promoting wildfire mitigation services through active management. Latah County is a rural county by any measure. It is dominated by wide expanses of forest and rangelands intermixed with communities and rural houses.

Wildfires will continue to ignite and burn depending on the weather conditions and other factors enumerated earlier. However, active land management that modifies fuels, promotes healthy range and forestland conditions, and promotes the use of these natural resources (consumptive and non-consumptive) will insure that these lands have value to society and the local region. We encourage the US Forest Service, the Idaho Department of Lands, industrial forestland owners, private forestland owners, and all agricultural landowners in the region to actively manage their Wildland-Urban Interface lands in a manner consistent with reducing fuels and risks in this zone.

5.7.1 USDA Forest Service Projects

The Forest Service guiding documents used to determine land use are the National Fire Plan (NFP), Healthy Forest Restoration Act (HFRA), and the goal statements of the Agency to implement ecosystem restoration, protect communities from wildland fires, and to utilize

prescribed fire as a tool in the restoration of the forest and to reduce the effects of wildfire leading to catastrophic loss. During the development of this project acres managed by the Agency that are in Fire Regime Condition Class II and III were analyzed, as defined by the Forest Service and managed by the Agency within the Wildland Urban Interface (WUI), and the vegetation types that are present on these lands. The acres within the WUI in each County have been mapped and these areas have been identified by the Forest Service as high priority areas to be treated under the NFP and the HFRA.

Within Latah County, there are approximately 558,825 acres of Wildland-Urban Interface, of this land the US Forest Service manages approximately 32,307 acres of it. These acres were analyzed for their Current Fire Regime Condition Class. Approximately 17,648 acres of the USDA Forest Service managed lands in Latah County are within the WUI and are also currently rated in Fire Regime Condition Class 2 or 3. These are the priority acres in Latah County for the USDA Forest Service to treat. Appendix I has a map of these areas specifically identified. Most of the high risk lands in the vicinity of Harvard have treatment plans planned or proposed already. Implementation of these projects and future projects in this area is supported by the County. The high risk areas surrounding Bovill and Helmer are a high priority to get mitigation projects proposed and implemented. These projects are a very high priority in terms of the protection of life and resources through targeted fuels management.